STATE OF CALIFORNIA

STATE WATER RESOURCES CONTROL BOARD

ORDER WQ 2013-0111-UST

In the Matter of Underground Storage Tank Case Closure Pursuant to Health and Safety Code Section 25296.40 and the Low-Threat Underground Storage Tank Case Closure Policy

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BY THE EXECUTIVE DIRECTOR:[1]

By this order, the Executive Director directs closure of the underground storage tank (UST) case at the site listed below, pursuant to subdivision (a) of section 25296.40 of the Health and Safety Code.[2] The name of the petitioner, the site name, the site address, the Underground Storage Tank Cleanup Fund (Fund) claim number if applicable, the lead agency, and case number are as follows:

Conestoga-Rovers & Associates
Texaco Service Station
3311 Katella Avenue, Los Alamitos, CA 90720
Fund Claim No. 10425
County of Orange Health Care Agency, Case No. 93UT055

I. STATUTORY AND PROCEDURAL BACKGROUND

Upon receipt of a petition from a UST owner, operator, or other responsible party, section 25296.40 authorizes the State Water Resources Control Board (State Water Board) to close or require closure of a UST case where an unauthorized release has occurred, if the State Water Board determines that corrective action at the site is in compliance with all of the requirements of subdivisions (a) and (b) of section 25296.10. The State Water Board, or in certain cases the State Water Board Executive Director, may close a case or require the closure

[1] State Water Board Resolution No. 2012-0061 delegates to the Executive Director the authority to close or require the closure of any UST case if the case meets the criteria found in the State Water Board's Low-Threat Underground Storage Tank Case Closure Policy adopted by State Water Board Resolution No. 2012-0016.

[2] Unless otherwise noted, all references are to the California Health and Safety Code.

of a UST case. Closure of a UST case is appropriate where the corrective action ensures the protection of human health, safety, and the environment and where the corrective action is consistent with: 1) Chapter 6.7 of division 20 of the Health and Safety Code and implementing regulations; 2) Any applicable waste discharge requirements or other orders issued pursuant to division 7 of the Water Code; 3) All applicable state policies for water quality control; and 4) All applicable water quality control plans.

State Water Board staff has completed a review of the UST case identified above, and recommends that this case be closed. The recommendation is based upon the facts and circumstances of this particular UST case. A UST Case Closure Summary has been prepared for the case identified above and the basis for determining compliance with the Water Quality Control Policy for Low-Threat Underground Storage Tank Case Closures (Low-Threat Closure Policy or Policy) are explained in the Case Closure Summary.

Low-Threat Closure Policy

In State Water Board Resolution No. 2012-0016, the State Water Board adopted the Low-Threat Closure Policy. The Policy became effective on August 17, 2012. The Policy establishes consistent statewide case closure criteria for certain low-threat petroleum UST sites. In the absence of unique attributes or site-specific conditions that demonstrably increase the risk associated with residual petroleum constituents, cases that meet the general and media-specific criteria in the Low-Threat Closure Policy pose a low-threat to human health, safety, and the environment and are appropriate for closure under Health and Safety Code section 25296.10. The Policy provides that if a regulatory agency determines that a case meets the general and media-specific criteria of the Policy, then the regulatory agency shall notify responsible parties and other specified interested persons that the case is eligible for case closure. Unless the regulatory agency revises its determination based on comments received on the proposed case closure, the Policy provides that the agency shall issue a uniform closure letter as specified in Health and Safety Code section 25296.10. The uniform closure letter may only be issued after the expiration of the 60-day comment period, proper destruction or maintenance of monitoring wells or borings, and removal of waste associated with investigation and remediation of the site.

Health and Safety Code section 25299.57, subdivision (l)(1) provides that claims for reimbursement of corrective action costs that are received by the Fund more than 365 days after the date of a uniform closure letter or a letter of commitment, whichever occurs later, shall not be reimbursed unless specified conditions are satisfied.

II. FINDINGS

Based upon the UST Case Closure Summary prepared for the case attached hereto, the State Water Board finds that corrective action taken to address the unauthorized release of petroleum at the UST release site identified as:

Conestoga-Rovers & Associates
Texaco Service Station
3311 Katella Avenue, Los Alamitos, CA 90720
Fund Claim No. 10425
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ensures protection of human health, safety, and the environment and is consistent with Chapter 6.7 of division 20 of the Health and Safety Code, and implementing regulations, the Low-Threat Closure Policy and other water quality control policies and applicable water quality control plans.

Pursuant to the Low-Threat Closure Policy, notification has been provided to all entities that are required to receive notice of the proposed case closure, a 60-day comment period has been provided to notified parties, and any comments received have been considered by the State Water Board in determining that the case should be closed.

Pursuant to section 21080.5 of the Public Resources Code, environmental impacts associated with the adoption of this Order were analyzed in the substitute environmental document (SED) the State Water Board approved on May 1, 2012. The SED concludes that all environmental effects of adopting and implementing the Low Threat Closure Policy are less than significant, and environmental impacts as a result of adopting this Order in compliance with the Policy are no different from the impacts that are reasonably foreseen as a result of the Policy itself. A Notice of Decision was filed August 17, 2012. No new environmental impacts or any additional reasonably foreseeable impacts beyond those that were addressed in the SED will result from adopting this Order.

The UST case identified above may be the subject of orders issued by the Regional Water Quality Control Board (Regional Water Board) pursuant to division 7 of the Water Code. Any orders that have been issued by the Regional Water Board pursuant to division 7 of the Water Code, or directives issued by a Local Oversight Program (LOP) agency for this case should be rescinded to the extent they are inconsistent with this Order.

III. ORDER

IT IS THEREFORE ORDERED that:

A. The UST case identified in Section II of this Order, meeting the general and media-specific criteria established in the Low-Threat Closure Policy, be closed in accordance with the following conditions and after the following actions are complete. Prior to the issuance of a uniform closure letter, the Petitioner is ordered to:

1. Properly destroy monitoring wells and borings unless the owner of real property on which the well or boring is located certifies that the wells or borings will be maintained in accordance with local or state requirements;

2. Properly remove from the site and manage all waste piles, drums, debris, and other investigation and remediation derived materials in accordance with local or state requirements; and

3. Within six months of the date of this Order, submit documentation to the regulatory agency overseeing the UST case identified in Section II of this Order that the tasks in subparagraphs (1) and (2) have been completed.

B. The tasks in subparagraphs (1) and (2) of Paragraph (A) are ordered pursuant to Health and Safety Code section 25296.10 and failure to comply with these requirements may result in the imposition of civil penalties pursuant to Health and Safety Code section 25299, subdivision (d)(1). Penalties may be imposed administratively by the State Water Board or Regional Water Board.

C. Within 30 days of receipt of proper documentation from the Petitioner that requirements in subparagraphs (1) and (2) of Paragraph (A) are complete, the regulatory agency that is responsible for oversight of the UST case identified in Section II of this Order shall notify the State Water Board that the tasks have been satisfactorily completed.

D. Within 30 days of notification from the regulatory agency that the tasks are complete pursuant to Paragraph (C), the Deputy Director of the Division of Water Quality shall issue a uniform closure letter consistent with Health and Safety Code section 25296.10, subdivision (g) and upload the uniform closure letter and UST Case Closure Summary to GeoTracker.

E. Any Regional Water Board or LOP agency directive or order that directs corrective action or other action inconsistent with case closure for the UST case identified in Section II is rescinded, but only to the extent the Regional Water Board order or LOP agency directive is inconsistent with this Order.

T. Dawes Howard
Executive Director

11/14/13
Date

State Water Resources Control Board

UST CASE CLOSURE SUMMARY

Agency Information

Agency Name: County of Orange Health Care Agency (County)	Address: 1241 East Dyer Road, Suite 120 Santa Ana, CA 92705
Agency Caseworker: Mr. Kevin Lambert	Case No.: 93UT055

Case Information

USTCF Claim No.: 10425	Global ID: T0605901672
Site Name: Texaco Service Station	Site Address: 3311 Katella Los Alamitos, CA 90720 (Site)
Petitioner: Conestoga-Rovers & Associates Attention: Mr. Andrew M. Ellsmore	Address: 175 Technology, Suite 150 Irvine, CA 92618
USTCF Expenditures to Date: $0	Number of Years Case Open: 26

URL: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0605901672

Summary

The Low-Threat Underground Storage Tank Case Closure Policy (Policy) contains general and media-specific criteria, and cases that meet those criteria are appropriate for closure pursuant to the Low-Threat Policy. This Case meets all of the required criteria of the Policy. A summary evaluation of compliance with the Policy is shown in **Attachment 1: Compliance with State Water Board Policies and State Law**. The Conceptual Site Model upon which the evaluation of the Case has been made is described in **Attachment 2: Summary of Basic Site Information.** Highlights of the Conceptual Site Model of the Case are as follows:

The release at the Site was first discovered in 1987 during the removal of a 280-gallon waste oil Underground Storage Tank (UST). The release was further characterized in 1989 during the removal of four 8,000-gallon gasoline USTs and in 1993 during the removal of a 10,000-gallon UST. Remedial actions at the Site were performed in 1995 during the excavation and disposal of approximately 11,000 tons of petroleum impacted soil, in 1997 during the injection of dilute hydrogen peroxide solution into groundwater, and between 2002 and 2004 during the operation of a Dual Phase Extraction (DPE) system. Residual petroleum constituents exist in submerged soil samples between approximately 15 and 25 feet below ground surface (bgs) along the southern edge of the Site. The groundwater plume that exceeds Water Quality Objectives (WQOs) is approximately 125 feet long and extends off-Site to the south beneath Katella Avenue.

The petroleum release is limited to the shallow soil and groundwater. The affected groundwater beneath the Site is not currently being used as a source of drinking water or for any other designated

beneficial use, and it is highly unlikely that the affected groundwater will be used as a source of drinking water or for any other beneficial use in the foreseeable future. Public supply wells are usually constructed with competent sanitary seals and intake screens that are in deeper more protected aquifers. Remaining petroleum constituents are limited, stable and declining. Remedial actions have been implemented and further remediation is not necessary. Additional assessment/monitoring will not likely change the conceptual model. Any remaining petroleum constituents do not pose significant risk to human health, safety or the environment.

Rationale for Closure under the Policy

- General Criteria – Site **MEETS ALL EIGHT GENERAL CRITERIA** under the Policy.

- Groundwater Media-Specific Criteria – Site meets the criteria in **CLASS 2**. Based on an analysis of Site specific conditions that under current and reasonably anticipated near-term future scenarios, the contaminant plume poses a low threat to human health and safety and to the environment and WQOs will be achieved within a reasonable time frame.

- Petroleum Vapor Intrusion to Indoor Air – Site meets **CRITERIA (2) a, Scenario 4.**

- Direct Contact and Outdoor Air Exposure – Site meets **CRITERIA (3) a**. Maximum concentrations of petroleum constituents in soil are less than or equal to those listed in Table 1. The estimated naphthalene concentrations in soil meet the thresholds in Table 1 and the Policy criteria for direct contact by a factor of eight. It is highly unlikely that naphthalene concentrations in the soil, if any, exceed the threshold.

Objections to Closure

County staff objected to UST case closure because:

1. The current groundwater data does not meet County Monitored Natural Attenuation (MNA) guidelines. The County states that 5 additional monitoring wells and a minimum of two years of groundwater monitoring with MNA parameters are needed to demonstrate that natural attenuation is occurring and support case closure.
   RESPONSE: Existing groundwater monitoring data indicates that the groundwater plume that exceeds WQOs is stable to decreasing in aerial extent. Installing additional wells and collecting an additional two years of groundwater data for MNA parameters is unnecessary to demonstrate that degradation is occurring and that WQOs will likely be met within a reasonable time frame.
2. The remaining source area contamination in soil including maximum benzene of 64 milligrams per kilogram (mg/kg) appears to be contributing to a dissolved-phase contaminant plume. This represents potential risks to street utility worker s and down-gradient residents.
   RESPONSE: The benzene concentration of 64 mg/kg in soil was reported in boring B-03 at 20 feet bgs during 2010. It is unlikely that utility workers would excavate down to a depth of 20 feet bgs at a depth that is approximately 11 feet below the existing water table. Benzene in soil at 20 feet bgs does not pose a significant risk to utility workers.

   Four hydropunch borings (HP-04 through HP-07) and one monitoring well (MW-9) were advanced between the Site and the residential properties located south of the Site on Katella Avenue. Groundwater data from these locations demonstrate that the petroleum impacted groundwater plume does not extend beneath the residential properties. In addition, the

groundwater plume at the Site is stable to decreasing in areal extent and is therefore unlikely to pose a threat to future residents south of the Site.

Recommendation for Closure

The corrective action performed at this Site ensures the protection of human health, safety, the environment and is consistent with Chapter 6.7 of the Health and Safety Code and implementing regulations, applicable state policies for water quality control and the applicable water quality control plan, and case closure is recommended.

Prepared By: _____ Date 7/18/13
Eric Morita, PG No. 8534
Engineering Geologist

Reviewed By: _____ Date 7/18/13
Benjamin Heningburg, PG No. 8130
Senior Engineering Geologist

ATTACHMENT 1: COMPLIANCE WITH STATE WATER BOARD POLICIES AND STATE LAW

The Site complies with State Water Resources Control Board policies and state law. Section 25296.10 of the Health and Safety Code requires that Sites be cleaned up to protect human health, safety, and the environment. Based on available information, any residual petroleum constituents at the Site do not pose significant risk to human health, safety, or the environment.

The Site complies with the requirements of the Low-Threat Underground Storage Tank (UST) Case Closure Policy as described below.[1]

Is corrective action consistent with Chapter 6.7 of the Health and Safety Code and implementing regulations? The corrective action provisions contained in Chapter 6.7 of the Health and Safety Code and the implementing regulations govern the entire corrective action process at leaking UST sites. If it is determined, at any stage in the corrective action process, that UST case closure is appropriate, further compliance with corrective action requirements is not necessary. Corrective action at this Site has been consistent with Chapter 6.7 of the Health and Safety Code and implementing regulations and, since this case meets applicable case-closure requirements, further corrective action is not necessary, unless the activity is necessary for case closure.	☒ Yes ☐ No
Have waste discharge requirements or any other orders issued pursuant to Division 7 of the Water Code been issued at this Site?	☐ Yes ☒ No
If so, was the corrective action performed consistent with any order?	☐ Yes ☐ No ☒ NA
General Criteria General criteria that must be satisfied by all candidate sites:	
Is the unauthorized release located within the service area of a public water system?	☒ Yes ☐ No
Does the unauthorized release consist only of petroleum?	☒ Yes ☐ No
Has the unauthorized ("primary") release from the UST system been stopped?	☒ Yes ☐ No
Has free product been removed to the maximum extent practicable?	☐ Yes ☐ No ☒ NA
Has a conceptual site model that assesses the nature, extent, and mobility of the release been developed?	☒ Yes ☐ No

[1] Refer to the Low-Threat Underground Storage Tank Case Closure Policy for closure criteria for low-threat petroleum UST sites.

Has secondary source been removed to the extent practicable?	☒ Yes ☐ No
Has soil or groundwater been tested for MTBE and results reported in accordance with Health and Safety Code, Section 25296.15?	☒ Yes ☐ No
Does nuisance as defined by Water Code, section 13050 exist at the Site?	☐ Yes ☒ No
Are there unique Site attributes or Site-specific conditions that demonstrably increase the risk associated with residual petroleum constituents?	☐ Yes ☒ No
Media-Specific Criteria Candidate sites must satisfy all three of these media-specific criteria: **1. Groundwater:** To satisfy the media-specific criteria for groundwater, the contaminant plume that exceeds water quality objectives must be stable or decreasing in areal extent, and meet all of the additional characteristics of one of the five classes of sites:	
Is the contaminant plume that exceeds water quality objectives stable or decreasing in areal extent?	☒ Yes ☐ No ☐ NA
Does the contaminant plume that exceeds water quality objectives meet all of the additional characteristics of one of the five classes of sites? If YES, check applicable class: ☐ 1 ☒ 2 ☐ 3 ☐ 4 ☐ 5	☒ Yes ☐ No ☐ NA
For sites with releases that have not affected groundwater, do mobile constituents (leachate, vapors, or light non-aqueous phase liquids) contain sufficient mobile constituents to cause groundwater to exceed the groundwater criteria?	☐ Yes ☐ No ☒ NA
2. Petroleum Vapor Intrusion to Indoor Air: The Site is considered low-threat for vapor intrusion to indoor air if Site-specific conditions satisfy all of the characteristics of one of the three classes of sites (a through c) or if the exception for active commercial fueling facilities applies.	
Is the Site an active commercial petroleum fueling facility? Exception: Satisfaction of the media-specific criteria for petroleum vapor intrusion to indoor air is not required at active commercial petroleum fueling facilities, except in cases where release characteristics can be reasonably believed to pose an unacceptable health risk.	☐ Yes ☒ No
a. Do Site-specific conditions at the release Site satisfy all of the applicable characteristics and criteria of scenarios 1 through 3 or all of the applicable characteristics and criteria of scenario 4? If YES, check applicable scenarios: ☐ 1 ☐ 2 ☐ 3 ☒ 4	☒Yes ☐ No ☐ NA
b. Has a Site-specific risk assessment for the vapor intrusion pathway been conducted and demonstrates that human health is protected to the satisfaction of the regulatory agency?	☐ Yes ☐ No ☒ NA

c. As a result of controlling exposure through the use of mitigation measures or through the use of institutional or engineering controls, has the regulatory agency determined that petroleum vapors migrating from soil or groundwater will have no significant risk of adversely affecting human health?	☐ Yes ☐ No ☒ NA
3. Direct Contact and Outdoor Air Exposure: The Site is considered low-threat for direct contact and outdoor air exposure if Site-specific conditions satisfy one of the three classes of sites (a through c).	
a. Are maximum concentrations of petroleum constituents in soil less than or equal to those listed in Table 1 for the specified depth below ground surface (bgs)?	☒ Yes ☐ No ☐ NA
b. Are maximum concentrations of petroleum constituents in soil less than levels that a Site-specific risk assessment demonstrates will have no significant risk of adversely affecting human health?	☐ Yes ☐ No ☒ NA
c. As a result of controlling exposure through the use of mitigation measures or through the use of institutional or engineering controls, has the regulatory agency determined that the concentrations of petroleum constituents in soil will have no significant risk of adversely affecting human health?	☐ Yes ☐ No ☒ NA

ATTACHMENT 2: SUMMARY OF BASIC INFORMATION (Conceptual Site Model)

Site Location/ History

- The Site is located at the intersection of Katella Avenue and Walnut Street. The Site is improved with a single story building, a paved parking lot, and landscaped planters. It is currently operated as a Jiffy Lube, an automotive repair and oil change business. No USTs currently operate at the Site.
- The Site is bound to the north by a residential property, to the east by Walnut Street (a two lane street) with commercial retail across the street, to the south by Katella Avenue (an eight lane street) with residences across the street, and to the west by commercial retail.
- Nature of Contaminants of Concern: Petroleum hydrocarbons only.
- Primary Source of Release: UST system
- Discovery Date: 1987
- Release Type: Petroleum[2]
- Free Product: None reported.

Table A. USTs:

Tank No.	Size	Contents	Status	Date
1	280 gallon	Waste Oil	Removed	1987
2	8,000 gallon	Gasoline	Removed	1993
3	8,000 gallon	Gasoline	Removed	1993
4	8,000 gallon	Gasoline	Removed	1993
5	8,000 gallon	Gasoline	Removed	1993
6	10,000 gallon	Gasoline	Removed	1995
7	10,000 gallon	Gasoline	Removed	1995

Receptors

- Groundwater Basin: Anaheim Hydrologic Subarea which is located in the western part of the larger Coastal Plain of Orange County Groundwater Basin (8-1)
- Groundwater Beneficial Uses: Municipal and domestic supply (MUN), agricultural supply (AGR), industrial service supply (IND), and industrial process supply (PRO).
- Designated Land Use: Commercial
- Public Water System: Golden State Water Company
- Distance to Nearest Surface Waters: The northeast to southwest flowing San Gabriel River, a concrete lined channel, exists approximately ½-mile northwest of the Site.
- Distance to Nearest Supply Wells: State Well nos. 3010022-002, 3010022-035, and 3010022-038 are located approximately ½-mile east of the Site. State Well no. 3010022-001 is located approximately ½-mile southwest of the Site. All other active wells municipal wells are greater than 1-mile from the Site.

[2] "Petroleum" means crude oil, or any fraction thereof, which is liquid at standard conditions of temperature and pressure, which means at 60 degrees Fahrenheit and 14.7 pounds per square inch absolute.
(Health & Saf. Code, § 25299.2.)

Geology/ Hydrogeology

- Average Groundwater Depth: 9.81 feet below ground surface (bgs)
- Minimum Groundwater Depth: 5.97 feet bgs
- Groundwater Flow Direction: Southerly
- Geology: Asphalt underlain by fine sand to approximately 8 feet bgs, silt and clay from 8 to 30 feet bgs, and fine sand from 30 to a maximum explored depth of 45 feet bgs.
- Hydrogeology: Regionally, the Site is located in a portion of the Orange County Groundwater Basin that is pressurized and has upward vertical groundwater flow (Pressure Area). Groundwater within the upper 45 feet is unconfined.

Corrective Actions

- In 1995, remedial soil excavation was performed to a depth of approximately 25 feet bgs across the entire Site and to a depth of 30 feet bgs in the center of the Site beneath the former USTs. Approximately 11,000 tons of soil was removed from beneath the former USTs.
- In 1997, approximately 55-gallons of dilute hydrogen peroxide solution were injected in groundwater beneath the former USTs as part of an in-situ chemical oxidation remediation action.
- Between 2002 and 2004, DPE system was operated at the Site and removed an estimated 8,300 pounds of vapor phase hydrocarbons and approximately 48,600 gallons of groundwater.

Table B. Concentrations of Petroleum Constituents in Soil

Constituent	Maximum 0-5 feet bgs (mg/kg)	Maximum 5-10 feet bgs (mg/kg)
Benzene	Not Analyzed (NA)	0.04[a]/ NA[b]
Ethylbenzene	<0.0050[a]/0.055[b]	3.3[a]/0.0066[b]
Naphthalene	NA	NA[a]/0.0076[b]
PAHs*	NA	NA

a - Maximum concentrations reported after remedial soil excavation in 1995 but before DPE began in 2002.
b - Maximum concentrations reported after DPE was discontinued in 2004. DPE is the most recent remedial action.
* Poly-aromatic hydrocarbons as benzo(a)pyrene toxicity equivalent

Table C. Concentrations of Petroleum Constituents in Groundwater (December 2012)

Well ID	DTW	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
	(feet bgs)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
MW-1	9.92	4,600	**170**	6.5	13	12	<1.0
MW-2	9.31	<50	<0.50	<0.50	<0.50	<1.0	<0.50
MW-3	10.03	7,500	**1,200**	23	13	**36**	120
MW-4A	10.22	860	<0.50	<0.50	0.52	<1.0	3.3
MW-5	9.53	<50	<0.50	<0.50	<0.50	<1.0	<0.50
MW-6	---	---	---	---	---	---	---
MW-7	10.24	590	**1.8**	6.3	1.9	14	4.2
MW-8	9.40	3,700	**550**	21	5.6	**34**	**35**
MW-9	11.41	<50	<0.50	<0.50	<0.50	<1.0	<0.50
MW-11	11.13	<50	<0.50	<0.50	<0.50	<1.0	<0.50
WQOs			**1**	**40**	**29**	**17**	**5**

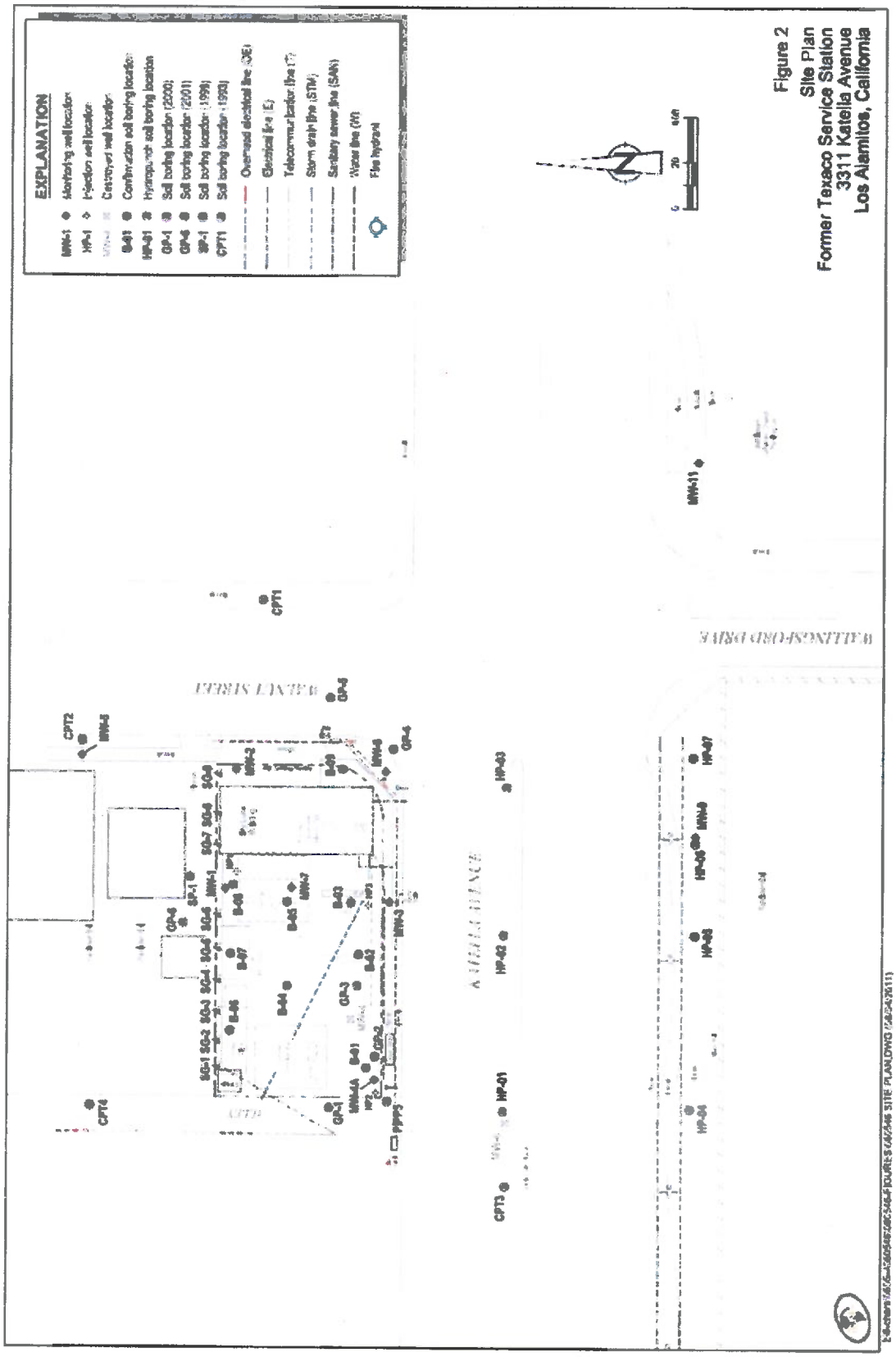
Notes for Table C are on the following page.

Notes for Table C :
Bold indicates that sample result exceeds Water Quality Objectives (WQOs).
DTW – depth to water in feet below ground surface (feet bgs)
TPHg – Total petroleum hydrocarbons quantified as gasoline
MTBE- Methyl tert-butyl ether
µg/L – micrograms per liter
"<" – indicates result is below the laboratory reporting limit
"---" – constituent not analyzed

Evaluation of Risk Criteria

- Maximum Petroleum Constituent Plume Length above WQOs: 125 feet.
- Petroleum Constituent Plume Determined Stable or Decreasing: Yes.
- Soil Sampled for MTBE: Yes, see Table B above
- Residual Petroleum Constituents Pose Significant Risk to the Environment: No
- Residual Petroleum Constituents Pose Significant Vapor Intrusion Risk to Human Health: No – Petroleum constituents most likely to pose a threat for vapor intrusion were removed during previous remedial actions. Site conditions demonstrate that the residual petroleum constituents in soil are protective of human health.
- Residual Petroleum Constituents Pose a Nuisance[3] at the Site: No
- Residual Petroleum Constituents in Soil Pose Significant Risk of Adversely Affecting Human Health: No. Site-specific conditions satisfy all of the applicable characteristics and criteria for petroleum vapor intrusion to indoor-air under Criteria 2 (a), Scenario 4.
- Residual Petroleum Constituents Pose Significant Direct Contact and Outdoor Air Exposure to Human Health: No – There are no soil samples results in the case record for naphthalene. However, the relative concentration of naphthalene in soil can be conservatively estimated using the published relative concentrations of naphthalene and benzene in gasoline. Taken from Potter and Simmons (1998), gasoline mixtures contain approximately 2% benzene and 0.25% naphthalene. Therefore, benzene concentrations can be directly substituted for naphthalene concentrations with a safety factor of eight. Benzene concentrations from the Site are below the naphthalene thresholds in Table 1 of the Policy. Therefore, estimated naphthalene concentrations meet the thresholds in Table 1 and the Policy criteria for direct contact by a factor of eight. It is highly unlikely that naphthalene concentrations in the soil, if any, exceed the threshold.

[3] Nuisance as defined in California Water Code, section 13050, subdivision (m).


EXPLANATION
Monitoring well location
Injection well location
Destroyed well location
Confirmation soil boring location
Hydropunch soil boring location
Soil boring location (2000)
Soil boring location (2001)
Soil boring location (1998)
Soil boring location (1993)
Overhead electrical line (OE)
Electrical (Ele)
Telecommunication line (T)
Storm drain line (STM)
Sanitary sewer line (SAN)
Water line (W)
Fire hydrant
Figure 2
Site Plan
Former Texaco Service Station
3311 Katella Avenue
Los Alamitos, California
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CPT1
CPT2
CPT3
CPT4
MW-11
HP-01
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